## PEER REVIEW HISTORY



## ARTICLE DETAILS

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| **TITLE (PROVISIONAL)** | What Are the Respiratory Health Research Priorities in Alberta Canada? A Stakeholder Consultation |
| **AUTHORS** | Sharpe, Heather; Cerato, Lisa; Derech, Darlene; Guirguis, L; Hayward, Kathleen; Lohmann, Tara; MacLean, Joanna; Manafo, Elizabeth; Paskey, Janice; Rasiah, Jananee; Rimkus, Mark; Rizvi, Syeda; Robinson, Gerry; Seefried, Brent; Somani, Zeeyaan; Tindall, Mindy; Vliagoftis, Harissios; Pendharkar, Sachin; Stickland, Michael K |

## VERSION 1 – REVIEW

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| **REVIEWER** | George, Maureen<br>Columbia University Medical Center |
| **REVIEW RETURNED** | 19-Jan-2022 |

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| **GENERAL COMMENTS** | This manuscript describes the process for establishing respiratory research priorities in Alberta.<br><br>Abstract - structured as if this is clinical trial (e.g., interventions, outcome measures) when this is process report.<br><br>Methods – the year of survey completion should be added to Phase 1.<br><br>Results – it is unclear how the researchers determined that responses reflected 461 unique individuals. Were IP addresses used? Month/year of second survey should be added. Table 1 has different number of respondents.<br><br>Discussion. Missing a more comprehensive comparison of priorities identified in this project to those identified by JLA, professional respiratory and sleep societies and nursing groups (some which also included patients, caregivers and clinicians, raising the question as to the whether the authors claim that their approach was novel is accurate). See, for example,<br>James Lind Alliance. Asthma top 10. Southampton, UK: James Lind Alliance. 2019. Available from: http:// www.jla.nihr.ac.uk/priority-setting-partnerships/asthma/top-10- priorities/<br>Mukherjee S, Patel SR, Kales SN, Ayas NT, Strohl KP, Gozal D, et al.; American Thoracic Society ad hoc Committee on Healthy Sleep. An official American Thoracic Society statement: the importance of healthy sleep. recommendations and future priorities. Am J Respir Crit Care Med 2015;191:1450– 1458.<br>George M, Hernandez C, Smith S, et al. Nursing Research Priorities in Critical Care, Pulmonary, and Sleep: International Delphi Survey of Nurses, Patients, and Caregivers. Ann Am Thorac Soc. 2020;17(1):1-10. doi:10.1513/AnnalsATS.201909-705ST |

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| | Kelly CA, Kirkcaldy AJ, Pilkington M, Hodson M, Welch L, Yorke J, et al. Research priorities for respiratory nursing: a UK-wide Delphi study. ERJ Open Res 2018;4:pii:00003–02018.<br><br>Add to limitations Data were collected 2017-2019 - priorities may have changed as the initial survey was nearly 5 years ago. Pandemic may also have changed priorities. Steering committee members were identified for participation which may have introduced selection bias.<br><br>Table 2. Not clear what is included in combustibles.<br><br>General- the authors repeatedly use the term “lived experience” to colloquially describe personal experience with a respiratory or sleep disease. As lived experience does have a scientific meaning in qualitative phenomenological studies of individual experiences. Thus, it would be preferable to describe these simply as personal experiences.<br><br>Strengths and limitations bullets – authors do not identify any limitations yet they discuss several limitation with an online survey that may have excluded participants without access and/or without technology literacy. |

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| **REVIEWER** | Stratton, Samuel<br>University of California, Los Angeles, Community Health Sciences |
| **REVIEW RETURNED** | 11-Mar-2022 |

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| **GENERAL COMMENTS** | GENERAL COMMENTS:<br><br>I appreciate the invitation to review this manuscript. The research objectives described by the Author included engagement of patients, care givers, clinicians, and researchers in identification of respiratory research priorities for a local Respiratory Health Strategic Clinical Network as well as informing the “stakeholders” of the identified priorities. This review is focused upon the study design and methods.<br><br>SPECIFIC COMMENTS:<br><br>1. As noted in the statement of the study objectives, multiple types of individuals invested in respiratory health are included in the steering committee and study cohort. Therefore the study is not necessarily focused on a well defined outcome such as patient satisfaction or health improvement. By design, the multiple types of individuals with probable different motivations and objectives for respiratory health may confound any study results. The impact each category of participants on the outcomes should be determined to assure that the results can be generalized across all types of participants.<br><br>2. While not stated in an explicit statement, the recruitment of study participants appears to have been by use of convenience sampling. This form of sampling is a for of non-probability sampling and has a number of shortcomings. Most important is the inability to measure sampling error or selection bias. In addition, the motivation for participation may vary from a general target population. In essence, the study results can only apply to the participant group and cannot be expanded to a general target population.<br><br>3. Please provide a definition used for determination that potential |

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| | questions were answered by the literature. How where questions that may or may not have been answered in the literature addressed?<br><br>4. In the study design there is prioritization of potential outcome questions. It is reported that the steering committee made the priority determination. Problematic is that the steering committee is not evenly balanced and favors respiratory physicians. Further, the steering committee was split into two groups to address the two major types of questions. This is problematic as only one nurse and science director were included in the steering committee, resulting in lack of nursing and science director representation in one of the two groups that determined research priorities.<br><br>5. As noted in Table 1, the study participant group was not gender balanced which is a limitation of the study outcomes. |

**VERSION 1 – AUTHOR RESPONSE**

First Reviewer's Comments and Revisions

Abstract - structured as if this is clinical trial (e.g., interventions, outcome measures) when this is process report.
We have modified the abstract to better reflect the design (removing intervention and outcome measures), see page 2.

Methods – the year of survey completion should be added to Phase 1.
Thank you for this suggestion. The timing of the first survey has been added to the manuscript on Page 9.

Results – it is unclear how the researchers determined that responses reflected 461 unique individuals. Were IP addresses used?

To protect anonymity, we did not collect IP addresses and confirm they were unique users. Therefore, we have changed the wording of the first sentence in the results section on Page 10 to better capture that 461 responses were received (rather than unique individuals).

Month/year of second survey should be added.

The timing of the second survey has been added to the manuscript on Page 10.

Table 1 has different number of respondents.
Thank you, this error has been addressed on Page 11. There was a total of 448 included in the study.

Discussion.

Missing a more comprehensive comparison of priorities identified in this project to those identified by JLA, professional respiratory and sleep societies and nursing groups (some which also included patients, caregivers and clinicians, raising the question as to the whether the authors claim that their approach was novel is accurate). See, for example,
James Lind Alliance. Asthma top 10. Southampton, UK: James Lind Alliance. 2019. Available from: http:// www.jla.nihr.ac.uk/priority-setting-partnerships/asthma/top-10- priorities/
Mukherjee S, Patel SR, Kales SN, Ayas NT, Strohl KP, Gozal D, et al.; American Thoracic Society ad hoc Committee on Healthy Sleep. An official American Thoracic Society statement: the importance of healthy sleep. recommendations and future priorities. Am J Respir Crit Care Med 2015;191:1450–1458 PubMed .
George M, Hernandez C, Smith S, eal. Nursing Research Priorities in Critical Care, Pulmonary, and Sleep: International Delphi Survey of Nurses, Patients, and Caregivers. Ann Am Thorac Soc. 2020;17(1):1-10. doi:10.1513/AnnalsATS.201909-705ST

Kelly CA, Kirkcaldy AJ, Pilkington M, Hodson M, Welch L, Yorke J, et al. Research priorities for respiratory nursing: a UK-wide Delphi study. ERJ Open Res 2018;4:pii:00003–02018.
Thank you for highlighting this limitation. We have integrated these respiratory-specific research prioritization studies to the discussion to improve the breadth of comparison and note these important studies listed (Page 13-15)

Add to limitations Data were collected 2017-2019 - priorities may have changed as the initial survey was nearly 5 years ago. Pandemic may also have changed priorities. Steering committee members were identified for participation which may have introduced selection bias.
Thank you for identifying these important limitations. We have added reference to the potential for selection bias related to the Steering Committee, as well as that priorities may have changed as a reflection of time, and in particular, the COVID-19 pandemic (Page 17).

Table 2. Not clear what is included in combustibles.
Thank you for raising this important point. We have added a footnote to Table 2 (Page 22) to indicate that combustibles included research questions related to cigarette smoking, vaping and cannabis, as well as secondary effects from these products.

General- the authors repeatedly use the term “lived experience” to colloquially describe personal experience with a respiratory or sleep disease. As lived experience does have a scientific meaning in qualitative phenomenological studies of individual experiences. Thus, it would be preferable to describe these simply as personal experiences.
We have removed the term ‘lived experience’ throughout the manuscript and replaced it with ‘personal experience’ where appropriate. In one instance we have left the term, as it was used by our colleagues in their published papers on research prioritization in individuals with depression in Alberta, Canada.

Strengths and limitations bullets – authors do not identify any limitations yet they discuss several limitation with an online survey that may have excluded participants without access and/or without technology literacy.
Thank you for highlighting this oversight. We have added an additional bullet in the “Strengths and Limitations of the Study” section on Page 3.

Second Reviewer’s Comments and Revisions

1. As noted in the statement of the study objectives, multiple types of individuals invested in respiratory health are included in the steering committee and study cohort. Therefore the study is not necessarily focused on a well defined outcome such as patient satisfaction or health improvement. By design, the multiple types of individuals with probable different motivations and objectives for respiratory health may confound any study results. The impact each category of participants on the outcomes should be determined to assure that the results can be generalized across all types of participants.

As we were not able to identify the specific motivations that may have impacted participants’ motivation for participating, we have noted this limitation (Page 15-16) and stated it impacts the study generalizability in the population. While it is a limitation of the study, we limited the request for personal information for two important reasons. Firstly, we wanted to ensure participants anonymity was respected and that we did not collect information that was not essential to conduct the prioritization. Secondly, we wanted to ensure the time to complete the survey was minimal, and would be easy to complete. Our Steering Committee felt these two issues were important and decided to limit the survey to essential information only, out of respect for the potential participants. The broad representation on the Steering Committee and in the study cohort is intentional for research prioritization activities.

2. While not stated in an explicit statement, the recruitment of study participants appears to have been by use of convenience sampling. This form of sampling is a for of non-probability sampling and has a number of shortcomings. Most important is the inability to measure sampling error or selection bias. In addition, the motivation for participation may vary from a general target population. In essence, the study results can only apply to the participant group and cannot be expanded to a general target population.
Thank you for raising this important point. We have more clearly indicated methodology used for patient recruitment on Page 7-8 of the manuscript. In addition, on Page 15-16 in the 'Limitations' section, as well as in the 'Strengths and limitatios of this study' (Page 3) we have more clearly outlined the challenges associated with the sampling approach. Of note, several strategies were used to increase participation from a variety of individuals. For example, communications were sent from several stakeholders and stakeholder groups, through social media, and we also distributed cards through clinical settings.

3. Please provide a definition used for determination that potential questions were answered by the literature. How where questions that may or may not have been answered in the literature addressed?
We have added a definition to more adequately describe how determination was made regarding whether the question was answered in the literature (Page 9-10). In addition, the supplemental file details the process for triaging all questions submitted.

4. In the study design there is prioritization of potential outcome questions. It is reported that the steering committee made the priority determination. Problematic is that the steering committee is not evenly balanced and favors respiratory physicians. Further, the steering committee was split into two groups to address the two major types of questions. This is problematic as only one nurse and science director were included in the steering committee, resulting in lack of nursing and science director representation in one of the two groups that determined research priorities.
Thank you for raising this point. We have clarified on Pages 11 that while the group conducted initial discussions in small groups, the entire group reconvened and worked collectively to ensure all voices were heard in consensus building. Thus, all members of the steering committee were included in priority determination. In addition, on Page 5, the rationale for having four physicians on the Steering Committee was included (to ensure representation from paediatrics, adult respiratory (one focused primarily on COPD, and another on asthma/allergy) and sleep medicine.

5. As noted in Table 1, the study participant group was not gender balanced which is a limitation of the study outcomes.

Thank you, this is an important point to note, and it has been added to the discussion of the study sample limitations on Page 16.

**VERSION 2 – REVIEW**

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| **REVIEWER** | George, Maureen<br>Columbia University Medical Center |
| **REVIEW RETURNED** | 18-Apr-2022 |

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| **GENERAL COMMENTS** | The authors are to be applauded for their responsiveness to the prior critique. |

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| **REVIEWER** | Stratton, Samuel<br>University of California, Los Angeles, Community Health Sciences |
| **REVIEW RETURNED** | 24-Apr-2022 |

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| **GENERAL COMMENTS** | A flaw in the research design used for the study is the sampling |

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| | technique used to recruit participants. This is a structural problem that cannot be corrected. Convenience sampling in the method for distribution of the surveys was used for obtaining data. This technique is of limited validity due to inability to measure participation motivation bias, potential selection bias, and inability to determine sampling error. The results of this study cannot be generalized beyond those who participated in the study as is implied in drawing conclusions from the research findings. |

**VERSION 2 – AUTHOR RESPONSE**

First Reviewer's Comments and Revisions
None specified
Thank you for your comments.

Second Reviewer's Comments and Revisions
A flaw in the research design used for the study is the sampling technique used to recruit participants. This is a structural problem that cannot be corrected. Convenience sampling in the method for distribution of the surveys was used for obtaining data. This technique is of limited validity due to inability to measure participation motivation bias, potential selection bias, and inability to determine sampling error. The results of this study cannot be generalized beyond those who participated in the study as is implied in drawing conclusions from the research findings.
-Thank you for your comment. We appreciate the importance of capturing this significant limitation of the sampling technique used in the study. As such, we have modified the limitation section to more closely align with the reviewer's concerns (see Page 14). We have also added greater detail in the third bullet of the 'Strengths and Limitations' section to ensure we adequately address this important issue (see Page 3).